

### **AMENDMENTS TO THE CLAIMS**

1. (Currently amended) An image output method comprising the steps of:

obtaining initial image data representing an initial image recorded in an original image and ID information for identifying an original picture by reading the original image having at least a portion of the original picture and the ID information inseparable from the original picture, and wherein the original image further includes at least second image data, said second image data being unrelated to said ID information and any watermark data;

reading equivalent original picture data representing an equivalent original picture corresponding to the ID information from storage means storing a plurality of sets of original picture data having ID information related thereto;

comparing the initial image data with the equivalent original picture data and obtaining processed image data for output by carrying out processing on the equivalent original picture data; and

obtaining a print by printing the processed image data;

wherein obtaining processed image data further comprises:

extracting a portion of the initial image data that corresponds to the second image data;

including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to at least the portion of the original picture in the initial image data, wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with at least the portion of the original picture in the initial image data; and

composing the processed image data for output such that the second image data is in the processed image data and wherein the second image data overlays the portion of the equivalent original picture data in the processed image data.

2. (Original) An image output method as defined in claim 1, wherein the ID information is secretly embedded in the initial image.

3. (Original) An image output method as defined in claim 1, further comprising the step of carrying out copying prevention processing on the processed image data and/or on the print.

4. (Original) An image output method as defined in claim 2, further comprising the step of carrying out copying prevention processing on the processed image data and/or on the print.

5. (Currently amended) An image output method as defined in any one of claims 1 to 4, further comprising the step of managing a copyright of the original picture based on the ID information, said management including

storing copyright information indicating whether the original picture is afforded copyright protection in said storage means,

determining whether the original picture is afforded copyright protection; and

processing and composing an alternative image that is not afforded copyright protection if it is determined that the original picture is afforded copyright protection.

6. (Currently amended) An image output apparatus comprising:  
reading means for obtaining initial image data representing an initial image recorded in an original image and ID information for identifying an original picture by reading the original image having at least a portion of the original picture and the ID information inseparable from the original picture, and wherein the original image further includes at least second image data, said second image data being unrelated to said ID information and any watermark data;

storage means for storing a plurality of sets of original picture data in relation to ID information;

reading means for reading equivalent original picture data representing an equivalent original picture corresponding to the ID information of the original picture from the storage means;

processing means for obtaining processed image data for output by comparing the initial image data with the equivalent original picture data and carrying out processing on the equivalent original picture data; and

output means for obtaining a print by printing the processed image data,

wherein obtaining processed image data further comprises:

extracting a portion of the initial image data that corresponds to the second image data;

including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to at least the portion of the original picture in the initial image data, wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with at least the portion of the original picture in the initial image data; and

composing the processed image data for output such that the second image data is in the processed image data and wherein the second image data overlays the portion of the equivalent original picture data in the processed image data.

7. (Original) An image output apparatus as defined in claim 6, wherein the ID information is secretly embedded in the initial image.

8. (Original) An image output apparatus as defined in claim 6, further comprising copying prevention processing means for carrying out processing to prevent copying on the processed image data and/or on the print.

9. (Original) An image output apparatus as defined in claim 7, further comprising copying prevention processing means for carrying out processing to prevent copying on the processed image data and/or on the print.

10. (Original) An image output apparatus as defined in any one of claims 6 to 9, further comprising information management means for managing a copyright of the original picture based on the ID information.

11. (Currently amended) A computer-readable recording medium storing a program to cause a computer to execute the procedures of:

obtaining initial image data representing an initial image recorded in an original image and ID information for identifying an original picture by reading the original image having the original picture and the ID information inseparable from the original picture, and wherein the original image further includes at least second image data, said second image data being unrelated to said ID information and any watermark data;

reading equivalent original picture data representing an equivalent original picture corresponding to the ID information from storage means storing a plurality of sets of original picture data having ID information related thereto;

comparing the initial image data with the equivalent original picture data and obtaining processed image data for output by carrying out processing on the equivalent original picture data; and

obtaining a print by printing the processed image data,

wherein obtaining processed image data further comprises:

extracting a portion of the initial image data that corresponds to the second image data;

including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to at least the portion of the original picture in the initial image data, wherein the portion of the equivalent original picture

data in the processed image data geometrically agrees with at least the portion of the original picture in the initial image data; and

composing the processed image data for output such that the second image data is in the processed image data and wherein the second image data overlays the portion of the equivalent original picture data in the processed image data.

12. (Original) A computer-readable recording medium as defined in claim 11, wherein the ID information is secretly embedded in the initial image.

13. (Original) A computer-readable recording medium as defined in claim 11, the program further comprising the procedure of carrying out copying prevention processing on the processed image data and/or on the print.

14. (Original) A computer-readable recording medium as defined in claim 12, the program further comprising the procedure of carrying out copying prevention processing on the processed image data and/or on the print.

15. (Original) A computer-readable recording medium as defined in any one of claims 11 to 14, the program further comprising the procedure of managing a copyright of the original picture based on the ID information.

16. (Currently amended) A method to output an image, comprising:

receiving a composition input data, wherein the composition input data includes an input image data, wherein the input image data includes at least a portion of an original picture data with ID information corresponding to the original picture data embedded therein and at least second image data, said second image data being unrelated to said ID information and any watermark data;

extracting the ID information from the input image data;

retrieving from storage an original image data corresponding to the ID information, wherein the original image data includes the original picture data with the related ID information embedded therein;

composing an output image data for output by:

extracting a portion of the initial image data that corresponds to the second image data; replacing at least the portion of the original picture data of the input image data of the composition input data with a corresponding portion of the original image data retrieved from the storage in the output image data, wherein the corresponding portion of the original image data of the output image data geometrically matches with the at least the portion of the original picture data in the input image data, and

composing the output image data for output such that the second image data is in the output image data and overlays the corresponding portion of the original image data in the output image data.

17. (Previously presented) The method of claim 16, wherein the step of composing includes:

extracting the portion of the original image data corresponding to the at least the portion of the original picture data in the input image data; and

replacing the at least the portion of the original picture data in the input image data of the composition input data with the corresponding portion of the original image data.

18. (Previously presented) The method of claim 17, wherein the step of extracting the corresponding portion of the original image data includes:

pattern matching the original image data with the input image data.

19. (Previously presented) The method of claim 18, wherein the step of pattern matching includes one or more of scaling, rotating, cropping and translating.

20. (Previously presented) The method of claim 16, wherein the ID information is embedded in the original image data and the input image data in one or more subplanes, wherein a dimension of the original image data  $m \times n$  pixels, and wherein:

each subplane is composed of  $p \times q$  pixels,  $p < m$  and  $q < n$ , and

the subplanes are spaced apart a predetermined number of pixels from each other.

21. (Previously presented) The method of claim 20, wherein a bit value of the ID information is encoded in the subplanes.

22. (Previously presented) The method of claim 21, wherein the ID information is modulated on color channels of the original picture data.

23. (Previously presented) The method of claim 22, wherein the ID information is modulated onto lower bits of the color channels.

24. (Previously presented) The method of claim 22, wherein the color channels are R, G, and B.

25-28. (Canceled)

29. (Previously presented) The image output method as defined in claim 1, wherein the ID information is embedded within the equivalent original picture data stored in the storage means.

30. (Previously presented) The image output method as defined in claim 29, wherein the ID information is embedded within the portion of the equivalent original picture data in the processed image data.

31. (Previously presented) The image output method as defined in claim 1, wherein one or more portions of the initial image data other than the at least the portion of the original picture are reproduced in the processed image data.

32. (Previously presented) The image output method as defined in claim 1, wherein the processed image data are printed on a print medium with a copyguard feature.

33. (Previously presented) The image output apparatus as defined in claim 6, wherein the ID information is embedded within the equivalent original picture data stored in the storage means.

34. (Previously presented) The image output apparatus as defined in claim 33, wherein the ID information is embedded within the portion of the equivalent original picture data in the processed image data.

35. (Previously presented) The image output apparatus as defined in claim 6, wherein one or more portions of the initial image data other than the at least the portion of the original picture are reproduced in the processed image data.

36. (Previously presented) The image output apparatus as defined in claim 6, wherein the processed image data are printed on a print medium with a copyguard feature.

37. (Previously presented) The computer-readable medium as defined in claim 11, wherein the ID information is also embedded within the equivalent original picture data stored in the storage means.

38. (Previously presented) The computer-readable medium as defined in claim 37, wherein the ID information is embedded within the portion of the equivalent original picture data in the processed image data.



39. (Previously presented) The computer-readable medium as defined in claim 11, wherein one or more portions of the initial image data other than the at least the portion of the original picture are reproduced in the processed image data.

40. (Previously presented) The computer-readable medium as defined in claim 11, wherein the processed image data are printed on a print medium with a copyguard feature.

41. (Previously presented) The method of claim 16, wherein the ID information is also embedded within the original image data stored in the storage.

42. (Previously presented) The method of claim 41, wherein the ID information is embedded within the corresponding portion of the original image data in the output image data.

43. (Previously presented) The method of claim 16, wherein one or more portions of the composition input data other than the at least the portion of the original picture data are reproduced in the output image data.

44. (Previously presented) The method of claim 16, wherein the output image data are printed on a print medium with a copyguard feature.

45. (Currently amended) An image output method comprising the steps of:  
obtaining initial image data representing an initial image recorded in an original image and ID information for identifying an original picture by reading the original image having at least a portion of the original picture and the ID information inseparable from the original picture, and wherein the original image further includes at least second image data, said second image data being unrelated to said ID information and any watermark data;

reading equivalent original picture data representing an equivalent original picture corresponding to the ID information from storage means storing a plurality of sets of original picture data having ID information related thereto;

comparing the initial image data with the equivalent original picture data and obtaining processed image data for output by carrying out processing on the equivalent original picture data; and

obtaining a print by printing the processed image data,

wherein obtaining processed image data further comprises:

extracting a portion of the initial image data that corresponds to the second image data;

including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to at least the portion of the original picture in the initial image data, wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with at least the portion of the original picture in the initial image data; and

composing the processed image data for output such that the second image data is in the processed image data and wherein the portion of the equivalent original picture data in the processed image data overlays the second image data.

46. (Currently amended) An image output apparatus comprising:

reading means for obtaining initial image data representing an initial image recorded in an original image and ID information for identifying an original picture by reading the original image having at least a portion of the original picture and the ID information inseparable from the original picture, and wherein the original image further includes at least second image data, said second image data being unrelated to said ID information and any watermark data;

storage means for storing a plurality of sets of original picture data in relation to ID information;

reading means for reading equivalent original picture data representing an equivalent original picture corresponding to the ID information of the original picture from the storage means;

processing means for obtaining processed image data for output by comparing the initial image data with the equivalent original picture data and carrying out processing on the equivalent original picture data; and

output means for obtaining a print by printing the processed image data,  
wherein obtaining processed image data further comprises:

extracting a portion of the initial image data that corresponds to the second image data;

including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to at least the portion of the original picture in the initial image data, wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with at least the portion of the original picture in the initial image data; and

composing the processed image data for output such that the second image data is in the processed image data and wherein the portion of the equivalent original picture data in the processed image data overlays the second image data.

47. (Currently amended) A computer-readable recording medium storing a program to cause a computer to execute the procedures of:

obtaining initial image data representing an initial image recorded in an original image and ID information for identifying an original picture by reading the original image having the original picture and the ID information inseparable from the original picture, and wherein the original image further includes at least second image data, said second image data being unrelated to said ID information and any watermark data;

reading equivalent original picture data representing an equivalent original picture corresponding to the ID information from storage means storing a plurality of sets of original picture data having ID information related thereto;

comparing the initial image data with the equivalent original picture data and obtaining processed image data for output by carrying out processing on the equivalent original picture data; and

obtaining a print by printing the processed image data,

wherein obtaining processed image data further comprises:

extracting a portion of the initial image data that corresponds to the second image data;

including in the processed image data a portion of the equivalent original picture data read from the storage means that corresponds to at least the portion of the original picture in the initial image data, wherein the portion of the equivalent original picture data in the processed image data geometrically agrees with at least the portion of the original picture in the initial image data; and

composing the processed image data for output such that the second image data is in the processed image data and wherein the portion of the equivalent original picture data in the processed image data overlays the second image data.

48. (Currently amended) A method to output an image, comprising:

receiving a composition input data, wherein the composition input data includes an input image data, wherein the input image data includes at least a portion of an original picture data with ID information corresponding to the original picture data embedded therein and at least second image data, said second image data being unrelated to said ID information and any watermark data;

extracting the ID information from the input image data;

retrieving from storage an original image data corresponding to the ID information, wherein the original image data includes the original picture data with the related ID information embedded therein;

composing an output image data for output by:

extracting a portion of the initial image data that corresponds to the second image data;

replacing at least the portion of the original picture data of the input image data of the composition input data with a corresponding portion of the original image data retrieved from the storage in the output image data, wherein the corresponding portion of the original image data of the output image data geometrically matches with the at least the portion of the original picture data in the input image data, and

composing the output image data for output such that the second image data is in the output image data and the corresponding portion of the original image data in the output image data overlays the second image data.

49. (Previously presented) The image output method as defined in claim 1, wherein the original image further includes at least third image data, and wherein obtaining processed image data further comprises composing the processed image data for output such that the third image data is in the processed image data and wherein the third image data overlays both the portion of the equivalent original picture data in the processed image data and the second image data.

50. (Previously presented) The image output apparatus as defined in claim 6, wherein the original image further includes at least third image data, and wherein obtaining processed image data further comprises composing the processed image data for output such that the third image data is in the processed image data and wherein the third image data overlays both the portion of the equivalent original picture data in the processed image data and the second image data.

51. (Previously presented) The image output apparatus as defined in claim 11, wherein the original image further includes at least third image data, and wherein obtaining processed image data further comprises composing the processed image data for output such that the third image data is in the processed image data and wherein the third image data overlays both the portion of the equivalent original picture data in the processed image data and the second image data.

52. (Previously presented) The image output apparatus as defined in claim 16, wherein the input image data further includes at least third image data, and wherein composing an output image data further comprises composing the output image data such that the third image data is in the output image data and wherein the third image data overlays both the corresponding portion of the original image data in the output image data and the second image data.

53. (New) The image output method of claim 1, wherein the portion of the equivalent original picture data where the second image data overlays has a smallest data difference between the initial image data and the equivalent original picture data.